



THEIR PILL TILE WORE A COAT OF ARMS
see page 30

Spectrum
March - April 1963



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TYZINE (tetrahydrozoline hydrochloride) gives almost immediate, long-lasting relief (up to six hours) of nasal congestion. TYZINE (tetrahydrozoline hydrochloride) remains virtually free from rebound congestion even after two weeks of continued use. Systemic effects like nervousness, insomnia, and increased blood pressure rarely, if ever, develop when used in recommended dosage because topically administered TYZINE (tetrahydrozoline hydrochloride) takes the direct route to easy breathing.

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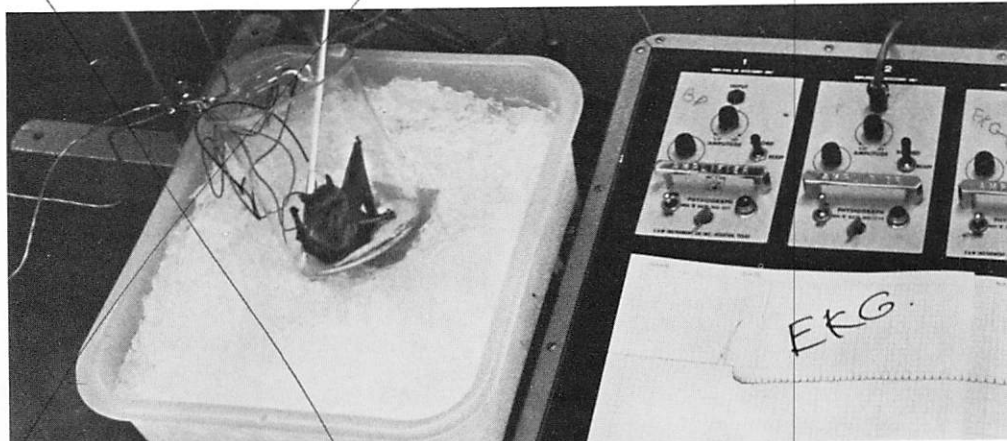
Brain tissue from a vampire bat is injected into white mice to verify the presence of rabies virus.

lus of the vaccine, and this may well have been responsible for the failure; it is accordingly argued that the two preparations should not be given concomitantly unless booster doses of embryo-type vaccine are added 10 and 20 days after the regular course is completed.

Rabies in humans has an incubation period of 14 to 240 days, with a mean of 57. Vaccination may not be protective if the incubation period is less than a month. Of 13 victims who have died despite vaccine treatment, 7 had an incubation period of 32 days or less. The value of antiserum is that it prolongs this period, provided dosage is adequate. A patient given only 500 units developed rabies in 14 days, whereas the fatal cases treated with 2000 to 3000 units, plus vaccine, had delayed onset.

It is of course impossible to tell how many people have escaped rabies thanks to natural immunity or a noninfective exposure rather than vaccine and antiserum.

Most vaccines of the Semple type have been prepared from Pasteur's original strain of rabies virus, serially passed through the brains of live rabbits and then treated with phenol, ultraviolet rays or heavy metals to inactivate the virus and in the hope of diminishing toxicity. Because Semple vaccine is prepared from cerebral tissue, it produces electroencephalographic evidence of neuropathy in as many as 15 per



*Physiology of the bats is studied at high and low temperature in the Dallas laboratory. Little brown bat (*Myotis lucifugus*).*

cent of individuals. Clinically recognizable encephalomyelitis occurs rarely, but in one series the incidence was nearly 2 per cent, and at least one fatality has been reported. Encephalomyelitis seems to develop five times as frequently after 14 injections of vaccine as it does after 7. Such allergic reactions are also more frequent in patients undergoing a second course of treatment.

Embryo vaccines are better tolerated, but are not yet specifically recommended by the World Health Organization* for prophylaxis following a suspicious bite. With duck embryo vaccine, adverse reactions are infrequent and seem to be limited to fever, local tenderness and lymphadenopathy. An added advantage is

that antibody production is more rapid than with Semple vaccine. The titer attained may be somewhat lower, but not significantly so. Chick embryo vaccines, though still in the experimental stage, appear to have the same advantages. These new purified preparations confer immunity in a course of four weekly intramuscular injections of 1 ml., followed by a booster dose 6 months later.

The hardship of rabies vaccination is not likely to be eliminated in the foreseeable future. Mass immunization can dispose of rabies in domestic animals, but as the domestic reservoir of infection is curtailed, the wildlife source rises. The bat population seems to constitute one of the greatest hazards.

END

*Techn. Rep. Ser. 201, 1960.



All three items shown here bear arms of Worshipful Society of Apothecaries and City of London. Rare oval pill tile and drug jar, both of Lambeth delft ca. 1650, are on display in Nelson Gallery—Atkins Museum (Burnap Collection), Kansas City, Mo. The shield-shaped tile is the one shown on cover of SPECTRUM; it is now in Pfizer collection at Smithsonian Institution. (See story below and comment on page 25.)



When pharmacists were physicians—

Their Pill Tile wore a Coat of Arms

LIKE THE APOTHECARY whom it symbolized and served, the workaday pill tile had an era of glory in 17th and 18th century England. From ancient times a basic tool of the apothecary's trade, the tile became a proud emblem of his high status during the period when he was recognized by the House of Lords as both physician and pharmacist.

The shield-shaped tile on our cover was recently found in London by Sydney N. Blumberg, retired Newtown, Connecticut druggist and well known collector of pharmaceutical antiques. It was acquired by Pfizer for presentation on April 23 to the Smithsonian Institution (see page 25).

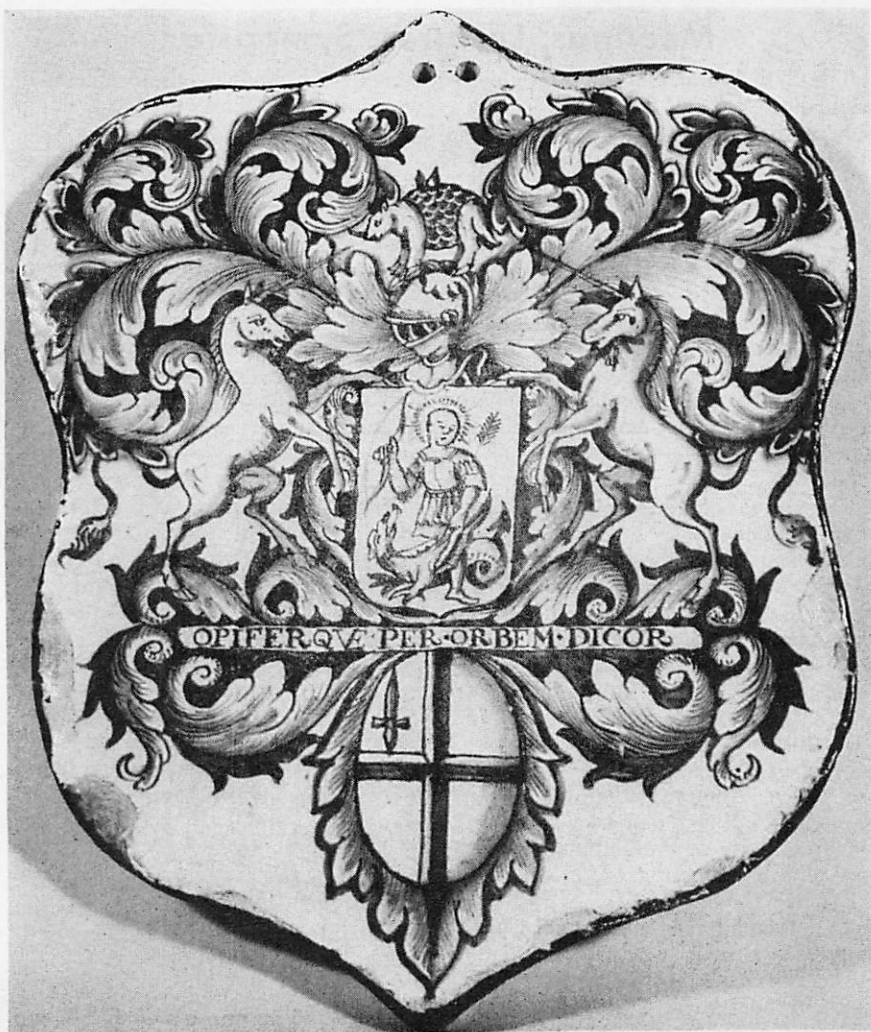
In addition to the coat of arms of the Worshipful Society of Apothecaries—evidence that its owner had met the requirements for membership in this guild—the tile bears the arms of the City of London. Few tiles

of this shape and age are still in existence; there is one at the British Museum, another at the Fitzwilliam Museum of the University of Cambridge, and a fragment of a third in Colonial Williamsburg. Like the one now at the Smithsonian, all these are of English delftware (blue on white), probably made in Lambeth.

The right of the apothecary to display arms, granted in 1617, represented a major victory in a long struggle for recognition and independence from other trades and professions. The struggle was first against the powerful spice merchants; then against their heirs, the grocers; and later against the physicians. For about two centuries the apothecary was responsible to the Grocers' Company. The grocers in 1457 had been granted the sole right of "garbling" (detecting and removing gross impurities) of drugs and

spices imported from the East. They also had the duty of examining drugs sold by apothecaries until early in the 17th century, when the two groups formed a common guild. A new Royal Charter in 1617 established an independent Worshipful Society of Apothecaries of London, on the ground that grocers were but merchants, while apothecaries plied a craft—then known as a "mystery."

In the meantime, apothecaries extended their activities into the practice of medicine. This caused considerable friction with the College of Physicians, which had been given in 1518 the exclusive right to medical practice in London and for seven miles round. But during the Great Plague of 1665, when most physicians fled the stricken city, the apothecaries remained at their posts and gained public favor as medical practitioners. In 1703, a triumphal



A Lambeth delft pill tile (above), made around 1690, has been presented to the Museum of History and Technology of the Smithsonian Institution by Chas. Pfizer & Co., Inc. Handpainted in blue on a white background, the tile displays the coat of arms of the Worshipful Society of Apothecaries of London, a pharmacy group granted a Royal Charter by James I in 1617. At the bottom of the tile appears the ancient coat of arms of London. Such tiles were presented to London pharmacists, during the 17th and early 18th centuries, upon completion of their apprenticeships. The tiles, used for making pills or as trade signs, are now extremely rare.

ing institutions have been offered by the **Neurological and Sensory Disease Program** of the US Public Health

Open to holders of an MD degree, the fellowship carries a stipend of \$6,000, and will be given to the

Meetings, Lectures, Symposia

The 27th **World Medical Assembly**, originally scheduled for Sept 22-28 in Mexico City, has been changed to Oct 13-19 at the Commodore Hotel in New York City, the World Medical Association has announced.

"The Patient and His Fits," the first of four lectures by Dr. **Denis Williams**, visiting professor of neurology at the University of Cincinnati, will be given May 31 at the university's Reid Lecture Hall. Williams is senior physician in neurology at St. George's Hospital, London.

The annual conference of the Congress of Scientists on Survival will be held June 14-16 at the Biltmore Hotel, New York City. The congress includes representatives of the major physical and behavioral disciplines and is con-

cerned with studying the problems of war and world tensions.

The 7th Inter-American Congress of Cardiology will be held in Montreal, Canada, June 14-19.

The 10th Congress of Hematology will be held in Stockholm, Aug 30-Sept 5. Two charter flights from North America for members and their families are being arranged, and details will be made available later this summer, according to the organization.

The 10th Congress of the International Society of Blood Transfusion will also be held in Stockholm, Sept 3-8. Main themes will be immunohematology and the preservation of blood.

Officers

Dr. **Hugh L. Dryden**, deputy administrator of the National Aeronautics and Space Administration has been elected to a third four-year term as home secretary of the National Academy of Sciences.

Drs. **Joseph Baker** and **Samuel Climo** have been elected president and vice-president, respectively, of the New England Society of Plastic and Reconstructive Surgery.

Dr. **Horace E. Klabunde** of San Francisco has been elected president of the California Society of Plastic Surgeons.

Dr. **Karl H. Beyer**, vice-president for life sciences at Merck Sharp & Dohme Research Laboratories, has been named president-elect of the American Society of Pharmacology and Experimental Therapeutics.

Duke University, has been reelected to a third one-year term as secretary of the Association of American Physicians.

Another Duke faculty member, Dr. **Morton D. Bogdonoff**, has been chosen president-elect of the American Federation for Clinical Research.

Dr. **Max E. Johnson** of San Antonio has been named president-elect of the Texas Medical Association.

Drs. **Robert T. Porter** and **Matthew Brody** have been elected president and vice-president, respectively, of the New York State Hospital Medical Alumni Association.

Dr. **Harry A. Horstman, Jr.** has been elected president of the District of Columbia Allergy Society. Dr. **Stanley I. Wolf** was named president-elect.

year in the history of pharmacy, a House of Lords decision conceded the dual function of the apothecary and recognized him officially as a medical practitioner. Subsequently the Society of Apothecaries granted, and continues to this day to grant, licenses to practice medicine.

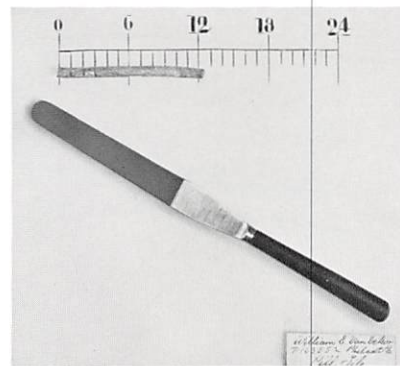
Pill tiles have a long history dating back to Roman times. Two tiles from this period, both rectangular black marble slabs about 11 x 7.5 cm., are exhibited in the archeological museum at Namur, Belgium.

By 1700 it had become the custom of the Society of Apothecaries to present the new pharmacist with a pill tile at the end of his apprenticeship. Some of these tiles — square, octagonal, oval or heart-shaped — have been preserved. Those showing signs of wear presumably were used in the manufacture of pills. The others were hung in windows as trade signs.

The coat of arms usually shows Apollo on the shield, holding a bow in his left hand and an arrow in his right, and bestriding a serpent. Above the shield is a helmet, surmounted by a rhinoceros and supported by two unicorns. Under the Apollo figure the motto reads *Opi ferque per orbem dicor* ("I am called helpbringer throughout the world"), a line taken from Ovid's poem about Apollo and Daphne. The unicorn appears in the design because its horn was reputed to be an antidote for poison, a cure for many ailments, and a preventive of plague; in prac-



Wedgwood tile with American eagle, introduced in early 19th century, is being added to Pfizer collection at McDowell Apothecary Shop in Danville, Ky. Van Velsor glass tile was patented in 1875. Patent model shown here is at Smithsonian Institution.



tice, what was used was the horn of a rhinoceros or a narwhal's tusk.

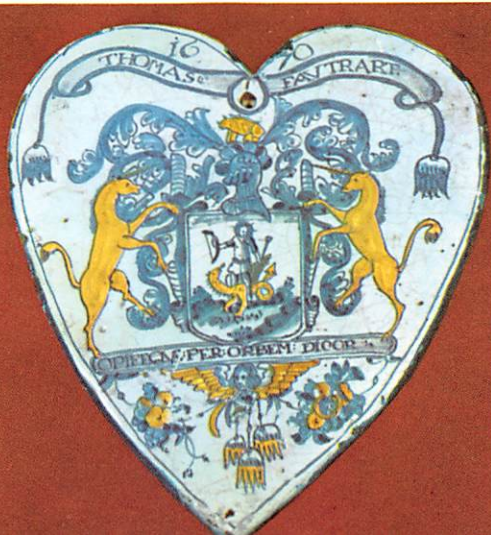
Around the middle of the 18th century, art gave way to practical considerations. Undecorated pill tiles, also of delft, with a graduated scale to indicate the divisions for cutting a rolled mass into individual pills, were introduced in England. Such tiles were exported to the American colonies before the Revolutionary War. After 1800, most tiles were made of Wedgwood, a lead-glazed earthenware light in weight and creamy in color and texture. One Wedgwood tile (another find of Mr. Blumberg's) with the American eagle design, a graduated scale, and the inscription "Real Warranted Wedgwood," will be added to the Pfizer collection at the Ephraim McDowell Apothecary Shop in Danville, Kentucky (SPECTRUM, January, 1960). Another such tile is in the museum

of the University of North Carolina School of Pharmacy.

But Wedgwood tiles, too, became obsolete, because they had tiny fissures from which some substances could not be dislodged. They were replaced by plate glass, on which the scale was engraved. To prevent slipping of the pill mass, W. E. Van Velsor of Philadelphia patented a tile with a ground-glass surface and an etched scale in 1875. This was the forerunner of the modern pill tile.

Today's tile is usually made of thick glass, half frosted and half clear; more rarely it is of porcelain. When used to mix ointments, it is covered with a sheet of greaseproof vegetable parchment. Although pill-making by hand is becoming a lost art, tiles are still part of the pharmacist's equipment required by the National Association of Boards of Pharmacy and by 39 state boards. END

The polychrome octagonal tile, ca. 1665, is in Apothecary Shop at Williamsburg, Va. The heart-shaped tile is a triple rarity—it is polychrome, bears the date 1670, and has the owner's name, Thomas Fautrart. Collection of Pharmaceutical Society of Great Britain.



After pill "pipes" were formed on tile, they were cut into individual pills. This is a 19th century pill-cutting machine. The two smaller items are a silverer (left), now in Pfizer collection at Smithsonian Institution, and a pill rounder, which will eventually go to McDowell Apothecary Shop.





235 EAST 42 STREET • NEW YORK 17, N. Y.

MEDICAL DEPARTMENT

MEASLES VACCINE

Dear Doctor:

As you may know, licenses to manufacture and distribute measles vaccine were granted by the National Institutes of Health earlier this year, and Pfizer was pleased to receive the first license in this series for the killed virus vaccine.

Pfizer Laboratories now expects to have PFIZER-VAX Measles-KTM* killed measles virus vaccine available for physician use in the near future. Progress towards Pfizer's live attenuated measles virus vaccine is also continuing, and future developments concerning it will be brought promptly to your attention.

For guidance concerning use of the new vaccines, you may wish to refer to the statement of the U.S. Public Health Service Ad Hoc Advisory Committee on Measles Control which appeared in the Journal of the American Medical Association of March 30. Of particular interest, in Section C of the statement, is the combination schedule employing both killed and live vaccines.

Preliminary reports by several investigators** indicate that sequential use of killed and live vaccines may provide the advantages of both, and reduce reactions often associated with live vaccine, even when used with gamma globulin.

In any medical advance, the best guide to product usage is the continuous review of clinical data. Pfizer Laboratories will therefore bring you further reports concerning measles immunization as developments occur. In the meantime, please feel free to write me if you have any further questions.

Cordially,

Roberts M. Rees, M.D.
Medical Director

RMR:ft

* PFIZER-VAX Measles-KTM is prepared from the Edmonston strain of rubeola virus propagated in monkey kidney tissue. It will be available in 10 dose, 5 cc multidose vials for intramuscular injection only.

** Dr. V. Fulginiti, et al., Amer. Jr. Dis. Children, Jan. 1963 and Dr. V. Guinee, et al., American Journal of Public Health, April, 1963.

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